



# MG2013 Advanced Welding Technology, Modulus 1 6.0 credits

Svetsteknologi, högre kurs, modul 1

This is a translation of the Swedish, legally binding, course syllabus.

## Establishment

## Grading scale

A, B, C, D, E, FX, F

## Education cycle

Second cycle

## Main field of study

Mechanical Engineering

## Specific prerequisites

Registered to MG1010 Introductory Welding Technology, general course

Basic eligibility and 120 cr in Engineering

knowledge of Swedish B/Swedish 3

or the corresponding

## Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

## Intended learning outcomes

After passing the course, the student will be able to:

- thoroughly describe welding of structural parts and constructions
- explain fundamental physical background of welding arcs
- describe advantages and disadvantages of welding machines in different situations
- describe advantages and disadvantages of systems for flexible welding with robots
- explain control and quality checks, during the welding process and after completing it
- accomplish an optimized choice of material, additive, weld parameters etc. including optimization of quality and costs ability to formulate new standards, rules and procedure specifications for welded constructions
- formulate new standards, rules and prescriptions regarding welded elements

## Course contents

Welding Processes, mechanization and automation

Welding Economics.

Work Environment with welding

Metrology

## Disposition

The classes are mainly concentrated to two full days of studies, in average every second week during two months. In between classes, homework assignments and preparation work have to be completed. High degree of attendance to classes is required.

## Course literature

"Karlebo Svetshandbok" (K Weman),

"Hälsa och säkerhet vid svetsning" (K Weman),

samt utdelat material i kursen.

## Examination

- TEN1 - Written exam, 3.0 credits, grading scale: A, B, C, D, E, FX, F
- LAB1 - Laboratory Work, 3.0 credits, grading scale: P, F

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

If the course is discontinued, students may request to be examined during the following two academic years.

## Other requirements for final grade

Passed written examination (TEN1; 3 cr)

Approved lab work (LAB1; 3 cr)

## Ethical approach

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.